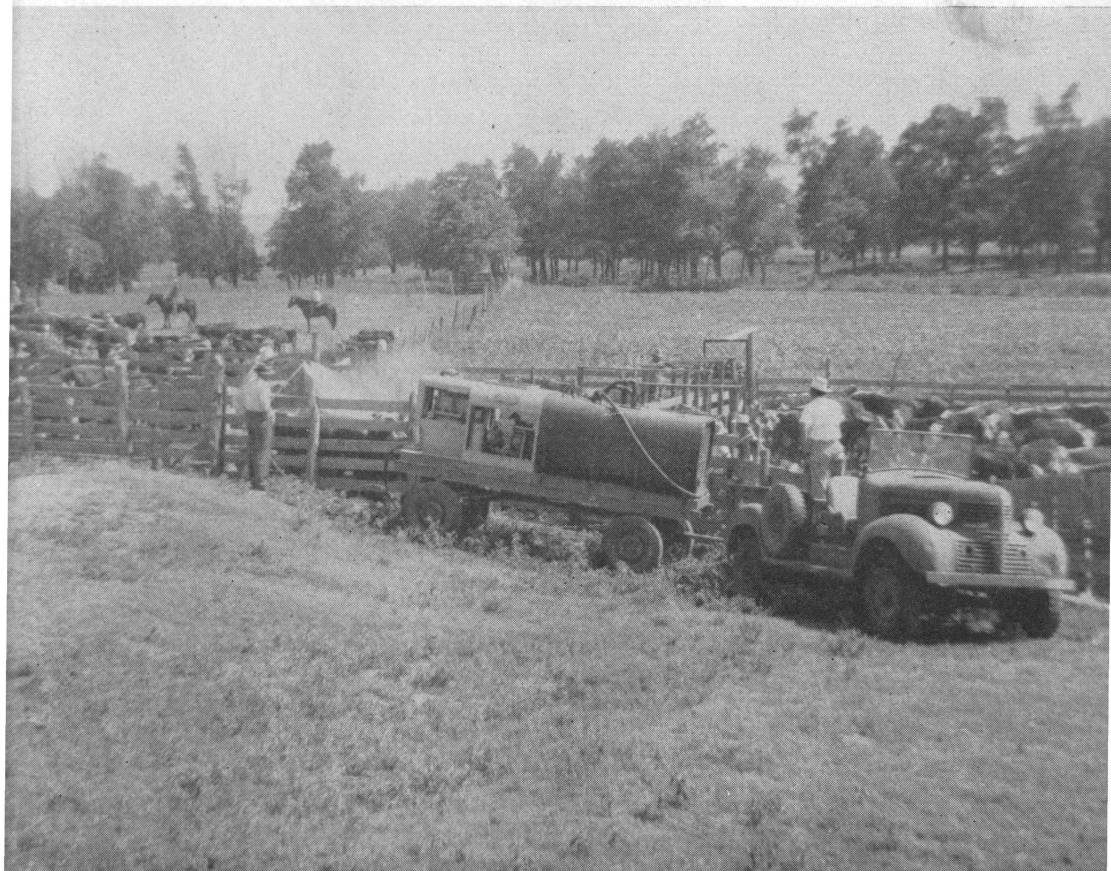


# EXTERNAL PARASITES OF CATTLE AND THEIR CONTROL



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# EXTERNAL PARASITES OF CATTLE AND THEIR CONTROL

By

Paul Gregg  
Assistant Extension Entomologist  
Texas A. & M. College

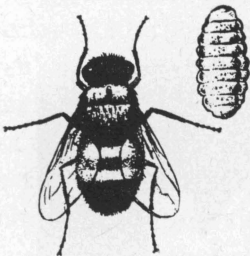
All of the parasites mentioned in this publication belong to the insect group which are six legged in the adult stage, except the ticks and mites and they belong to the mite group which have eight legs in the adult stage.

Cattle that are free of parasites have better appearance, are healthier, and are more productive than parasitic cattle.

The habits, damage, and control for each external parasite that attacks cattle are discussed in this publication.

## Heel Flies and Cattle Grubs

Heel flies are the parents of the cattle grub. Cattle are often seen in the spring running from heel flies, or standing in water to protect themselves from the flies which are trying to lay their eggs. Cattle lose weight by excessive running, or standing in water and not feeding. Many times cattle injure themselves running from flies, and the wounds often become infested with screwworms. There is a tremendous reduction in milk flow in the spring for six to eight weeks during the heel fly season. Infestation of these flies begins on farms where they are found since they cannot fly over a distance of one-half mile.



Heel Fly and  
Cattle Grub

The grubs hatch from the eggs laid below the hock, and bore into the flesh at the point of hatching. They spend seven to eight months tunneling around in the animal's body. This causes a loss of ten to

15 percent in feed. Two pounds of choice meat for every grubby animal slaughtered must be trimmed away. Hides with grubs holes are not useful for shoe leather and other purposes. The grubs move up to the back in fall and winter and finish their development there.

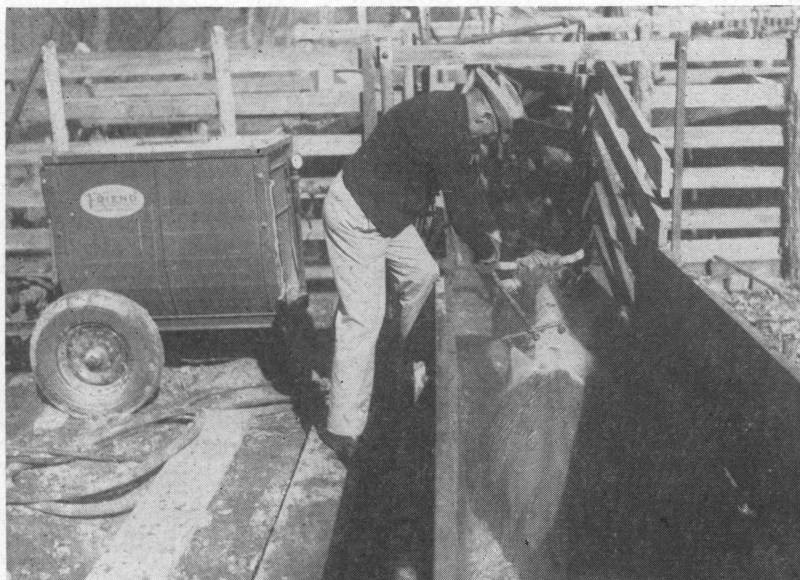
The first treatment for cattle grub control should be given in the fall of the year when grubs are mature and ready to drop to the ground. Mature grubs are dark brown to black when ready to drop out. Two additional treatments at 30-day intervals should be given, because all grubs do not come up at the same time. For complete control, four applications must be given at 21-day intervals.

Rotenone is the most effective insecticide against the cattle grub. It can be applied either as a dust for small herds, or as a spray for large herds.

1. Dust backs of animals thoroughly with three ounces of a mixture consisting of one part by weight of five percent rotenone to two parts by weight of either pyrophyllite, tripoli earth, or volcanic ash. A fruit jar with 15 holes in the lid one-fourth inch in diameter is best for applying dust. Rub dust down to the skin with finger tips.



Treating backs with rotenone powder for cattle grubs.



Spraying for cattle grubs.

2. Spray backs of animals with one-half gallon per animal of seven and one-half pounds of five percent rotenone per 100 gallons of water. A sprayer producing not less than 250 pounds of pressure is desirable.

### Cattle Lice

Three species of lice found on cattle are blood suckers. The other species is a biting lice. Lousy cattle are unthrifty and do not gain or even maintain their weight. The hair is rough and coarse and sometimes large hairless patches on the neck and body are caused by the animal rubbing the irritated area. Animals rubbing on fences often injure themselves and screwworms get into the wounds.



Cattle Lice

Lice are more abundant and injurious to cattle during the winter and spring months when the hair is long. Therefore, the best time to treat cattle for lice is the fall of the year. Both rotenone and DDT are effective for lice control. If rotenone is used, two treatments at 14 day intervals must be given for control. The animals can be dipped or

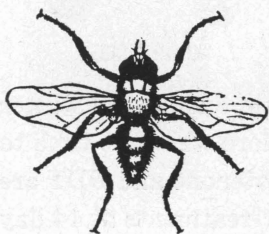


Steer rubbing to relieve irritation caused by cattle lice.

sprayed with one pound of five percent rotenone, ten pounds of wettable sulphur per 100 gallons of water, or with eight pounds of 50 percent DDT wettable powder per 100 gallons of water. A single treatment thoroughly applied with DDT will control the lice. When animals are treated for hornfly control in the spring at least twice at 14 to 16 day intervals and thoroughly wet with .25 percent DDT, the lice are also controlled. No treatment for lice is necessary the following fall unless lousy infested animals are added to the herd.

### Hornflies

Hornflies are blood sucking flies and when animals are heavily infested they lose weight. There is a considerable loss in milk flow when the flies are present. Hornflies feeding around the naval and other areas cause wounds that are infested readily with screw-worms. Treated animals have gained as much as one-third to one pound per day during the fly season over untreated animals.



Horn Fly

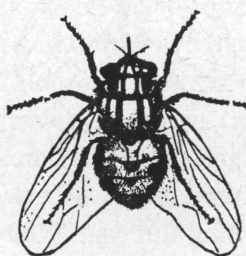
DDT is the most effective control for hornflies. Animals sprayed or dipped with four

pounds of 50 percent DDT wettable powder per 100 gallons of water are protected from hornflies for at least ten to 15 days. Usually two or three treatments with DDT in the spring and early summer and one in the fall protects the cattle from hornflies for the year. However, more treatments are necessary in the southern part of Texas. The animals should be treated when 20 to 25 flies per animal are present. Only the backs of dairy cattle should be treated because DDT can be absorbed in the milk.

### Stable Flies

Stable flies are blood sucking flies and cattle do not gain, or even maintain their weight when stable flies are present. There is loss in milk flow when they are abundant.

Treating cattle is not the most effective control for stable flies. They breed in straw and other moist litter on the ground and spend most of their time in the adult stage resting on the walls and other surfaces around the barn or stable. Spraying the interior of the barn with five percent DDT at six to eight week intervals during the fly season is the most effective control for the stable fly. The spray may be either DDT in oil or emulsions, or made from 50 percent wettable DDT powder. Use one gallon of five percent DDT spray per 1000 square feet of surface. Removing the straw and other litter from in and around the barn at weekly intervals is also helpful in reducing the stable fly population.



Stable Fly



Horse Fly

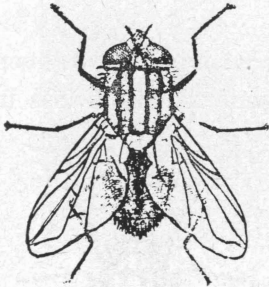
### Horse Flies

Horse flies are the largest flies that attack cattle and feed by sucking the blood. They are seldom numerous on cattle except in areas where cattle are pastured near a running creek or river. These flies spend their immature stages in running water and the adults feed on all types of livestock. The flies are more numerous in June and

July and it is during these months that the principal damage is done.

Unfortunately, there is no practical treatment that can be given to cattle to control the horse fly, although several insecticides are now under investigation for horse fly control. Neither DDT nor benzene hexachloride is effective for horse fly control.

### House Flies



House Fly

House flies do not take blood from cattle, but when they are numerous on the cattle, they are annoying. It has been reported that house flies may spread pink eye from one animal to another.

Treating the animals as suggested for stable fly control is the best control for house flies.

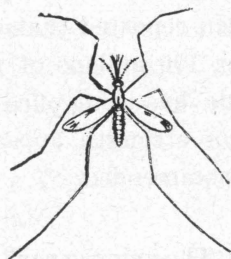


Spraying the interior of barns and stables with DDT to control stable and house flies.

### Mosquitoes

Mosquitoes are blood sucking insects and cause cattle to lose weight when they are numerous. Mosquitoes cause more damage to cattle that are pastured in creek and river bottoms, and also on the Gulf Coast.

Animals that are sprayed or dipped at two week intervals during the mosquito season with four pounds of 50 percent DDT wettable powder per 100 gallons of water have some protection from mosquito attacks.



Mosquito

### Buffalo Gnats

Buffalo gnats are tiny black flies that suck blood from cattle. Their habits are similar to the habits of mosquitoes, and they are found in the same areas. Buffalo gnats are seldom a problem except after river overflows, and most of the overflows come in the spring.



Buffalo Gnat

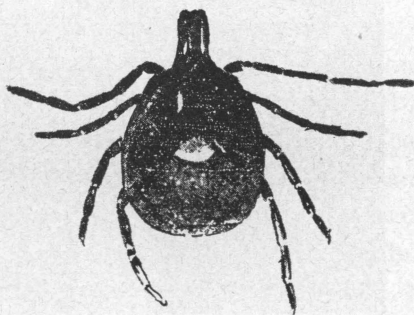
Treating cattle with six or eight pounds of 50 percent wettable DDT per 100 gallons of water has given protection to cattle for 12 to 15 days.

### Ticks

There are four ticks that are common to Texas cattle. All of the ticks are blood suckers and cause the cattle to lose weight if numerous. Screwworms often infest the wounds made by the feeding of the ticks.

#### Lone Star Ticks

Lone star ticks are more injurious to cattle in south, central and East Texas. They may be found on any part of the body. All stages may be found on the same animal. This tick can be controlled by dipping the cattle at two week intervals starting as soon as the ticks first appear



Lone Star Tick

in the spring and continue until the ticks are controlled. Even though DDT is still in the experimental stage for controlling ticks, it has been reported that eight pounds of 50 percent wettable DDT powder per 100 gallons of water used as a dip or spray at two week intervals has controlled ticks. Benzene hexachloride at .25 to .5 percent strength appears good for tick control, but has not yet been recommended.

### Spinose Ear Ticks

The spinose ear tick is common throughout most of Texas, especially in the west and northwest part of the state. It attacks cattle, horses, sheep, goats, deer, and occasionally man. The immature stages of the tick are attached in the ears. When fully fed, the nymph drops to the soil and molts to the adult stage. The adult never feeds.

Treat all salt, mineral and feed troughs with equal parts of kerosene and lubricating oil. The outside of the trough can be sprayed with the above material and surrounding soil should receive the same treatment.



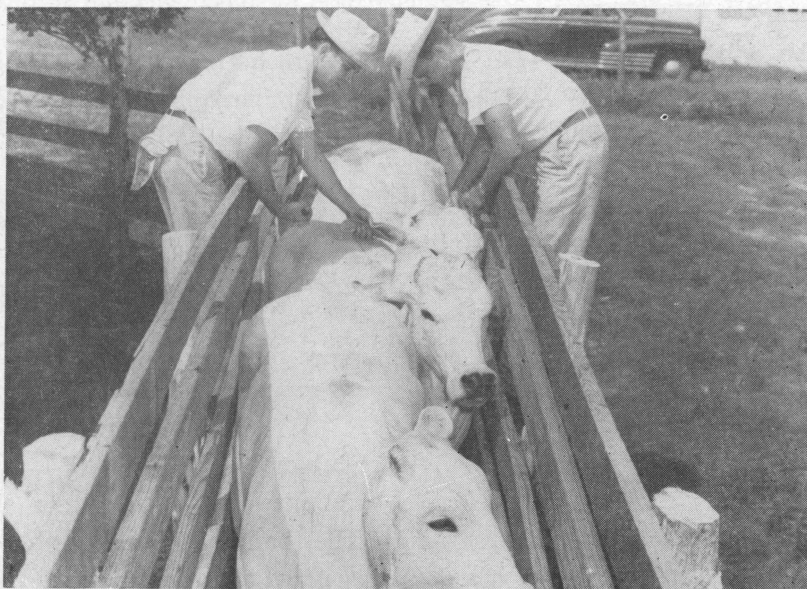
Spinose Ear Tick



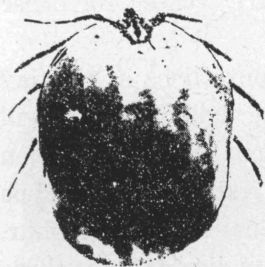
Treating ears with Stock 1029 for spinose ear ticks.

Treating the ears of livestock with Stock 1029 has proved to be the most effective method in combatting this pest. Best method of application is by using a one-inch paint brush, completely covering the inner and outer surface of the ear. One treatment in the spring and one in the fall is all that is necessary if the troughs are treated monthly.

Stock 1029 is a mixture of pyridine containing 45 percent rosin, 40 percent hercolyn, and 15 percent dibutyl phthalate.



Treating ears with Stock 1037 to control Gulf Coast ticks.



Gulf Coast Ear Tick

### Gulf Coast Ear Ticks

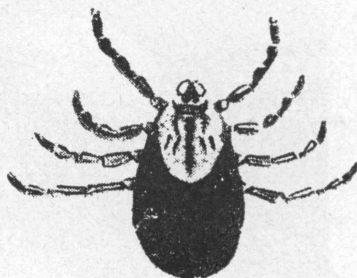
The Gulf Coast ear tick is found along the Gulf Coast and within an area of 100 miles of the coast. The young ticks feed on birds while the adults feed on cattle and other livestock. The adults usually attach themselves to the tip of the outer ear, but are sometimes found around the eyelid or

the base of the horns.

Treating inside and outside of the ear and around the base of the horns with Stock 1037 kills any ticks present and gives protection for three to six weeks. Repeat the application when ticks begin to attach themselves to the ear again. A container labeled as Stock 1037 should contain the following ingredients: Five percent technical DDT; 47 percent rosin; 33 percent hercolyn; and 15 percent dibutyl phthalate. Unless the mixture contains these exact ingredients, it is not 1037 and therefore is not recommended.

### Winter Ticks

The winter tick is more common on horses, but is often found on cattle. This tick is common within a 100 mile radius of San Antonio. Winter ticks are somewhat dormant during the summer, but numerous in fall and winter. A spray or wash containing .8 percent DDT is effective for controlling the pest.

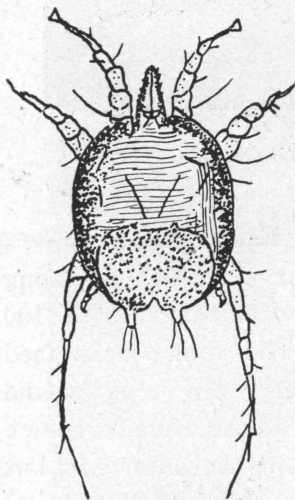


Winter Tick

### Scab or Mange Mites

These tiny mites feed under the skin and cause the hair to look rough and coarse. Quite often there are large patches without hair and covered with a large scab. This is not common in Texas and seldom found in herds that are treated for other parasites.

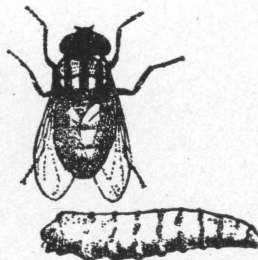
Dipping three or four times at ten-day intervals in rotenone and sulphur will cure light cases of scab or mange. When animals are heavily infested they should be dipped in two percent sulphid sulphur, which is a lime sulphur dip. At least three treatments at ten-day intervals should be given.



Mange Mite

## Screwworms

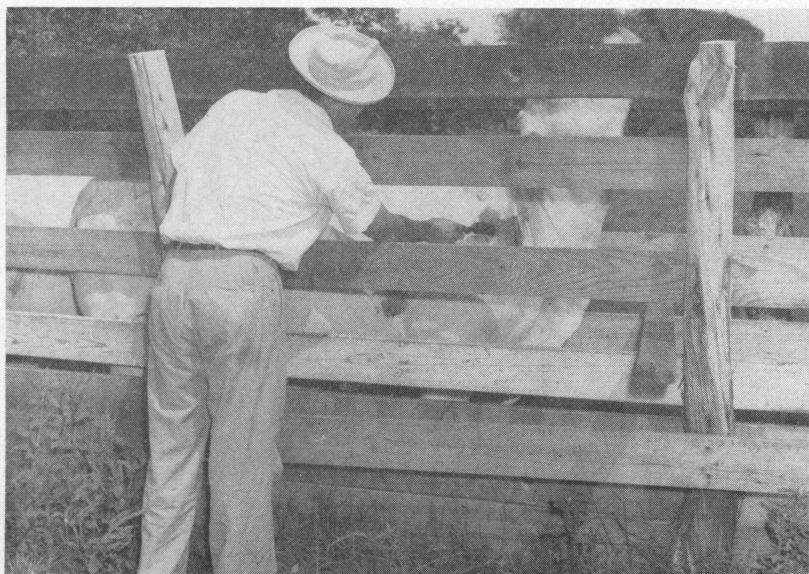
Screwworms are flesh eating worms and will often kill an animal which is not treated. The true screwworm fly lays its eggs only in wounds of living animals, and will not lay its eggs on dead animals. Ordinarily climatic conditions are such that the screwworm fly is eliminated from all parts of Texas during the winter months except in South Texas.



Screw Worm Fly  
and Screw Worm

## Prevention and Control of Screwworms

1. All man-made wounds such as branding, dehorning, shearing, and the like should be done at a time of the year when no screwworm flies are present.
2. If a control breeding program is feasible, the calves should be dropped in a season when no screwworm flies are present.
3. All wounds should be treated as soon as possible with Smear 62 or Smear 82 whether screwworms are present or not, because it is a surgical dressing as well as a worm killer.
4. It has been claimed that wounded animals treated for horn-flies or other parasites with DDT, have not been infested with screwworms. This statement has not been substantiated by research workers.



Treating wound with Smear 62 for screwworms.

Cooperative Extension Work in Agriculture and Home Economics, Agricultural and Mechanical College of Texas and United States Department of Agriculture Co-operating.

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